Name:

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Geometry, Period

Due Date: Thu, 16 Oct 2014

**Geometry**

**Homework**



**Identifying Special Angle Relationships**

***Instructions:*** *For each set below, use the same color for* ***special pairs of angles*** *(meaning both angles in a pair would have the same color). You will need 4 different colors (highlighters, pens, colored pencils, crayons, etc. are fine).*

|  |  |  |  |
| --- | --- | --- | --- |
| 1. Color code the two sets of  **alternate interior angles.**  **http://3.bp.blogspot.com/_a1VB-fjgHlQ/TNg2sR2PotI/AAAAAAAAAGI/j35r2-QYa84/s1600/pict16B.gif**  What is the **relationship** of these angles? | 2. Color code the two sets of **alternate exterior angles.**  **http://3.bp.blogspot.com/_a1VB-fjgHlQ/TNg2sR2PotI/AAAAAAAAAGI/j35r2-QYa84/s1600/pict16B.gif**  What is the **relationship** of these angles? | 3. Color code the four sets of **corresponding angles.**  **http://3.bp.blogspot.com/_a1VB-fjgHlQ/TNg2sR2PotI/AAAAAAAAAGI/j35r2-QYa84/s1600/pict16B.gif**  What is the **relationship** of these angles? | 4. Use one color to mark all angles that **≅** **(are congruent to)** (use 2 tic marks)and another color for angles (use 1 tic mark).  **http://3.bp.blogspot.com/_a1VB-fjgHlQ/TNg2sR2PotI/AAAAAAAAAGI/j35r2-QYa84/s1600/pict16B.gif** |

*Answer #5 & 6 just for* ***parallel lines*** *intersected by a* ***transversal.***

5.What types of angles are **congruent (≅)**?

6. Using the top intersection, list the **4 supplementary** **angles (=180°)**?

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 7. Find m∠1 and m∠2. | | 8. Find x and y. | | | | 9. Find m∠1 and m∠2. | |
| 10. What is the value of x? | | 11. Find the value of x. | | | | 12. What is the measure of the larger angle? | |
| 13. If lines *a* and *b* in the figure below are parallel, and intersected by the transversal, c, which of the following  statements must be true?   1. *m*1 = *m*7 Justify your response. 2. *m*2 = *m*8 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. *m*4 + *m*5 = 180 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. I only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2. III only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3. I and II only \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4. I, II, and III \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 5. None of the above | | | | | | | |
| 14. In the figure below, , and 9=100. Find 1.    ***a***  ***b*** | | | | 15. In the figure below, segments *MA* and *HT* are parallel. HMA, MAT, ATH, and THM are all right angles. If 5 = 40 what is the 4?  2  5  6  3  7  4  1  H  T  M  A | | | |
| 16. In the figure below,  *AD*  *BD* and *DC AB*.  If *m*B is 30, what is *m*C?   1. 30 2. 60 3. 150 4. Cannot be determined   Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  *A*  *D*  *C*  *B*  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | 17. In the figure below, . Find the indicated angle.  45  ?  *l*  130 o o  *m* | | | |
| 18. | | | | | | | |
| **G\_\_\_\_\_\_\_\_\_** | **R\_\_\_\_\_\_\_\_\_** (include angles) | | **A\_\_\_\_\_\_\_\_\_** (include formula) | | **S\_\_\_\_\_\_\_**(show all work!) | | **P\_\_\_\_\_\_\_\_\_** (use words and images) |